LA-UR-16-23359
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Title: TWF Project Project Overview and Status

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Intended for: EVMS Certification Black Hat Review, 2016-04-18/2016-04-21 (Los Alamos, New Mexico, United States)

Issued: 2016-05-11

TWF Project

Project Overview and Status

April 18, 2016

TRU Waste Facility (TWF)

PROJECT STATUS – MARCH 2016													
TPC ($M)	% Complete (BAC)	CBB ($M)	PM EAC ($M)	FPD EAC ($M)	CPI	CD-4	CD-4 CBB	PM Forecast	FPD Forecast	SPI	Safety	PM Assessment	FPD Assessment
$ 99.2	91.7%	$ 87.5	$91.3*	$ 90.4	0.93	1/31/18	6/2/17	2/10/17	3/1/17	0.96			

Note: performance evaluated per the Target fee CLIN and not based on CBB

Overall Assessment:

***TPC EAC**

- **Cost**
  - On track to achieve base Target Cost fee+
  - EAC creeping up month to month (design issues) but TPC healthy
  - TEC to OPC reallocation approved and working
- **Schedule**
  - On track for early completion (February 2017 CD-4 Forecast vs June 2017 CBB)
    - Extended construction subcontractor schedule challenging transition to ops activities and therefore potential acceleration

Challenges/Needs:

- **Late issue with access/opening in front of building 149. Additional bollard(s) required.**
- **A/E to complete final as-built and set point calculations**
- **Final DSA issues to take the 95% submittal to 100%**

TWF Mission Need

Mission Need: The TWF Project provides continuing capability to process DP TRU waste generated since 1999 and ship that waste to the Waste Isolation Pilot Plant to support programs at LANL. This is part of a comprehensive, long-term strategy to consolidate hazardous and radioactive waste operations in a smaller, more compact area that can operate safely, securely, and effectively for the foreseeable future.

Drivers:

- Solid waste operations at Material Disposal Area (MDA)-G support *all* NNSA programs at LANL that generate TRU Solid Waste
- Consent Order between DOE and NMED requires closure of MDA-G
- MDA-G solid waste operations to begin suspension to enable closure actions to proceed
- Interim solid waste management capabilities have been established to bridge the gap between the completion of the TRU Waste Project and closure of Area G
- The new TRU Waste Project will be the enduring staging, storage, characterization capability for TRU solid waste at LANL

Plutonium Facility (TA-55)

Chemistry and Metallurgy Research (TA-3)

Radioactive Liquid Waste Treatment Facility (TA-50)

Generators of Intra-site Transport of WIPP compliant containers to New TWF

Storage & Waste Certification at New TWF

Intra-site Transport to RANT

Loading at Radio Assay Non-destructive Testing (RANT) Facility

Ship To WIPP

TWF Performance Parameters

TWF Key Performance Parameters:

- Design has capacity of staging and storing 825 Drums per Drum Equivalent (Facility D/DE) under normal operations with a surge capacity of up to 1,240 D/DE.
- Facility will be constructed consistent with RCRA permit modifications as approved by the State of New Mexico Environment Department.
- Structures, systems, and components are designed to mitigate the off-site doses to the public and co-located worker during a design basis accident within the DOE standards limits.
- Infrastructure is provided to support equipment and calibration sources required to characterize and certify that TRU waste containers shipment to WIPP.

TWF Scope

This project provides an office building, characterization, and storage.

Early Construction Site Work

Early Construction Activities – November 2014

Project Progress – June 2015

Project Progress – Trenches June 2015

Project Progress – October 2015

Project Progress – December 2015

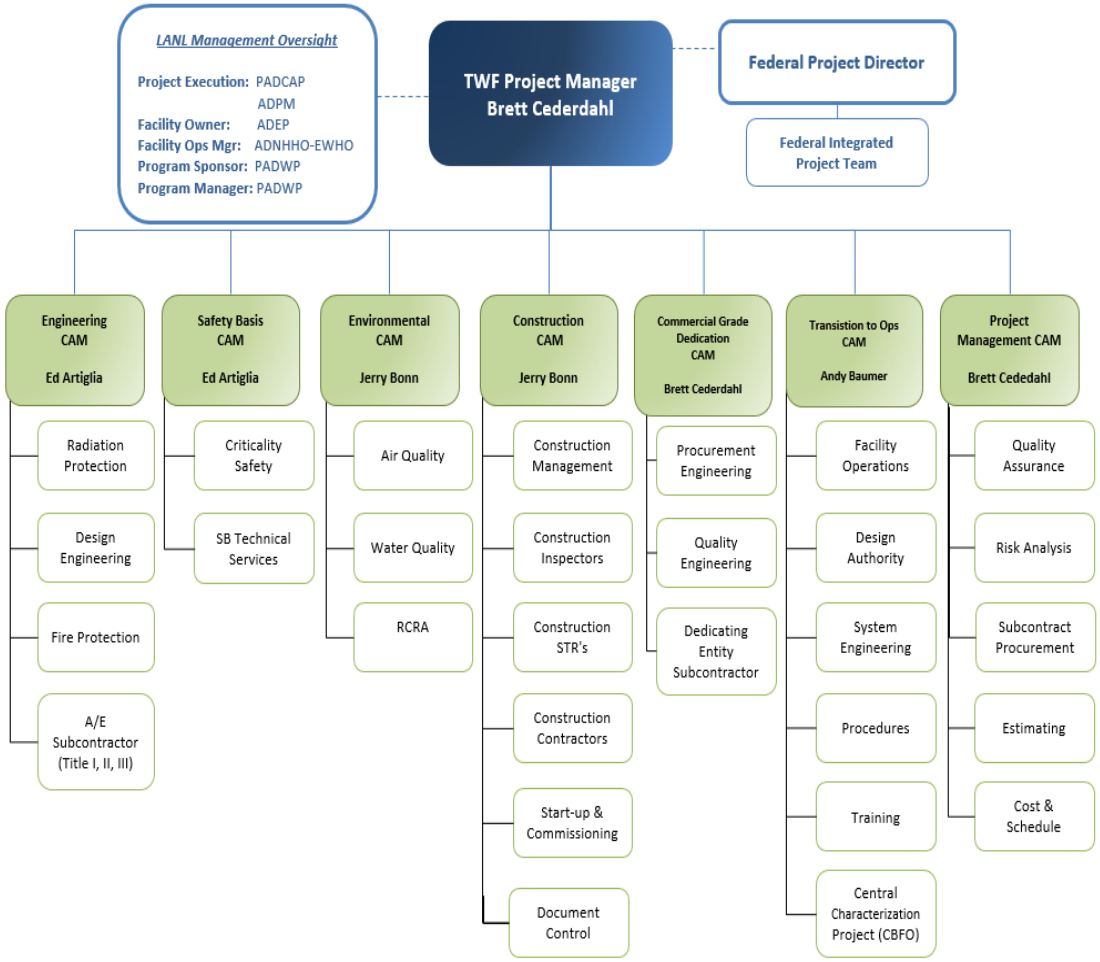
Project Execution

- **IPT team consists of dedicated project personnel, SMEs and other personnel as needed**
- **LANL provides:**
  - Overall management under contract to NNSA
  - Utility tie-in activities, potholing, and general construction support
  - GFE as specified
  - Security and telecom systems
  - Commissioning oversight
  - Management Self-Assessment
- **Subcontractors provide / perform:**
  - Title II and Title III and Engineer of Record support
  - Construction and component level testing
  - Complex equipment procurement & CGA services
- **Target price subcontract vs CBB**

Subcontracted Activities

- **JB Henderson**
  - GC – General contractor for construction and testing
- **MPR**
  - Providing CGD support for three complex systems
    - Emergency diesel generator
    - Seismic switch
    - Fire pump system
- **WNNNM**
  - Title II and Title III Services

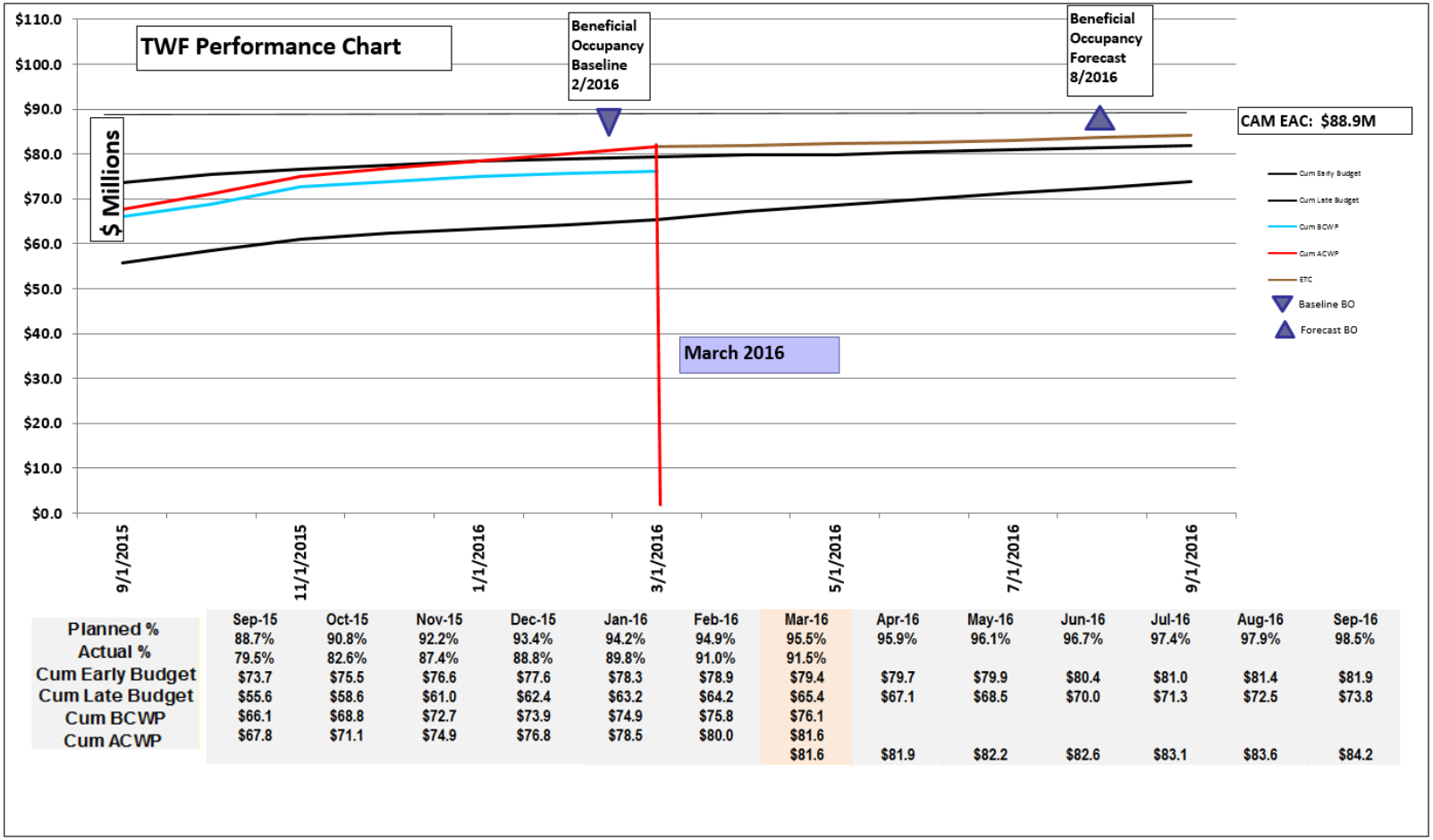
Project Organization



Current Status

- **Project is 91.7% complete**
- **Construction is 98% complete (final mods and punch list)**
- **Testing and Commissioning has started**
- **Transition to Operations activities supporting procedures and training**
- **Completion forecasts support CBB schedule (CD-4 F/C Jan 2017 vs CBB June 2017)**
- **Completion forecasts support Target Price fee and underrun sharing**
  - Not measured against CBB

Project Performance Summary



	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16
Planned %	88.7%	90.8%	92.2%	93.4%	94.2%	94.9%	95.5%	95.9%	96.1%	96.7%	97.4%	97.9%	98.5%
Actual %	79.5%	82.6%	87.4%	88.8%	89.8%	91.0%	91.5%						
Cum Early Budget	$73.7	$75.5	$76.6	$77.6	$78.3	$78.9	$79.4	$79.7	$79.9	$80.4	$81.0	$81.4	$81.9
Cum Late Budget	$55.6	$58.6	$61.0	$62.4	$63.2	$64.2	$65.4	$67.1	$68.5	$70.0	$71.3	$72.5	$73.8
Cum BCWP	$66.1	$68.8	$72.7	$73.9	$74.9	$75.8	$76.1						
Cum ACWP	$67.8	$71.1	$74.9	$76.8	$78.5	$80.0	$81.6						
							$81.6	$81.9	$82.2	$82.6	$83.1	$83.6	$84.2

Project Summary Cost Status

PM EAC Explanations:

PM Most Likely consists of unresolved MR trends plus CAM EACs:

- Sandstone road differing site conditions
- Switch Board B w/ Concrete Additions
- RTU Design Changes / Grade Surveys
- Changes from last months most likely calculation include JBH contract modifications for Seismic switch changes, fire pump installation, and anchor bolt changes for equipment. Changes also include; network infrastructure drawings, guy wires, power panels, MEL Impacts, multipole, electrical issues, Title III Calculations, Fall Protection and Shake Table Testing.

PM Best case consists of unresolved MR trends consisting of CAM EAC and any opportunities for:

- Reduced cost proposals for S/C mods.

PM Worst case consists of unresolved MR trends consisting of CAM EAC and further impacts for:

- Construction extensions due to design / performance issues
- DSA development / performance issues
- Title III extensions / ROS impacts
- 3rd Party dedicator mods
- NQA-1 construction mods
- Procedures / Training increased support

	Budget			EAC		
	CD2 BL	Annual EAC	BAC	Current	Last Mo	Delta
TEC	$54,399	$63,468	$62,338	$65,335	$65,110	$225
OPC	$19,653	$20,940	$20,878	$23,583	$23,473	$110
Subtotal - PMB	**$74,052**	**$84,408**	**$83,216**	**$88,918**	**$88,583**	$335
Remaining MR	$7,963	$6,668	$4,325			
CBB*	**$82,015**	**$91,076**	**$87,541**	**$90,218**	**$89,542**	$676
EAC Most Likely				$90,218	$89,542	$676
EAC Worst Case				$91,127	$90,451	$676
EAC Best Case				$90,127	$89,498	$629
Remaining Cont.	$15,239		$9,713	$7,883	$7,883	$0
ODC	$2,000		$2,000	$2,000	$2,000	$0
TPC	$99,254		$99,254	$100,101	$99,425	$676
				TPC EAC = ML EAC + Rem Cont + ODC		

	SPI	CPI
TEC (cum)	0.98	0.96
OPC (cum)	0.90	0.86
TPC	0.96	0.93
Current Month (TPC)	1.43	0.33
3 Month Ave (TPC)	1.40	0.49
PMB % Comp	TCPI (EAC)	TCPI (BAC)
91.7%	0.81	4.47

TWF Milestones

Project Health Assessment:

Safety	PM Proj. Health	Customer

Key Milestones	Baseline	Annual EAC	Forecast/ Actual
Design Start	08/01/10	08/01/10	08/01/10A
CD-2 Phase B Approved	02/28/13	02/28/13	02/28/13A
CD-3 Ph.B Approved	03/10/14	03/10/14	07/10/14A
Construction End PH. B	01/11/16	01/27/16	06/01/16F
Beneficial Occupancy	02/11/16	03/24/16	06/30/16F
CD-4 (PMB)	01/05/17	03/24/17	1/23/17F
CD-4 (CBB)	06/02/17	06/02/17	6/02/17F
CD-4 (TPC)	01/31/18	01/31/18	1/31/18F

FPD Performance Evaluation and Management Plan (PEMP)	Plan	Actual / Forecast
Receipt inspection Diesel Generator	8/6/2015	11/2/2015 A
Punchlist completion Ops Support Building	10/9/2015	10/21/2015 A
Receipt Inspection 2 Seismic Switches	8/6/2015	11/16/2015 A
Receipt Inspection Electric FW Pumps	8/7/2015	11/23/2015 A
Seismic Switch Installation	8/13/2015	01/22/2016A
Facilities Procedures Complete	11/5/2105	06/27/2016 F
Complete Construction	1/11/2016	06/01/2016 F
Personnel Training Comp - Facilities	12/8/2015	06/23/2016 F
Beneficial Occupancy	2/11/2016	06/30/2016 F
Obtain DSA SER	6/1/2016	07/18/2016 F
Waste Operations TSR Training Complete	4/15/2016	09/02/2016 F
DSA/TSR Implementation	7/1/2016	9/02/2016 F
Red Team	8/29/2016	10/04/2016 F
MSA Complete	9/13/2016	12/19/2016 F

Upcoming Federal Actions:

1. DSA/TSR comment resolution.
2. DNFSB Interface to address questions.

TWF Project Concerns

- Design changes impacting construction completion forecast
- EAC creep
- DSA SER schedule